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ABSTRACT

The reading achievement test scores of 239 low-income, southern, urban black students in grades three through eight were compared with their ability to comprehend the social studies books used in their classrooms. Achievement scores were obtained from the reading subtests of the Stanford Achievement Tests. A cloze passage was developed based on the social studies textbook for each grade level. The Dale-Chall Readability Formula was used to determine the readability at the designated grade level. Descriptive statistics including frequencies, means, medians, modes, and standard deviations were computed. Pearson product-moment correlations were computed between the results of the Stanford and the cloze procedure scores. In spite of moderately high correlations such as those of other studies between the Stanford and the cloze results, only a small percentage (15 percent) of the students were actually able to demonstrate the ability to read the grade level text with success. These data dramatize researchers' concerns that recent emphasis on raising test scores is resulting in curriculum distortion in favor of low level skills and away from comprehension of content. Worthy of further study are questions as to whether the teaching of narrow reading skills is enough to develop readers who can comprehend content text. (PN)

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Standardized Reading Scores as Predictors of Low Income Black Students' Ability to Read Text

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Standardized Reading Scores as Predictors of Low Income Black Students' Ability to Read Text

Introduction

The public media often report that test scores are improving in American schools. The Council of the Great City Schools reported in 1982 that 27 of 30 of the largest urban school systems, which are majority Black, increased test scores in basic skills areas (Hrul & Casserly, 1982). Smaller school systems have reported similar results (Savage, 1984).

In addition to test scores improving, the use of standardized testing in schools has increased. Although school systems have varying testing procedures and use a variety of instruments, it is impossible to know the extent of the increase (Haney, 1985).

Why has there been such an increase in standardized testing? One reason often given is the need to measure school effectiveness (Serow & Jackson, 1983). It is widely assumed that improved scores mean improved schools and more competent students. According to Burnes and Lindner (1985), higher scores also encourage taxpayers to increase taxes for the support of schools. Indeed, policymakers at the state and local levels must show that higher test scores result from enacted tax hikes.

Most of the reform movements have been directed at improving basic skills instruction. The testing of reading has been a focal point in these movements. One report that documented an increase in reading skill performance was issued by the National Assessment of Educational Progress in 1975 (Lapointe, 1984). This report concluded that a large number of

disadvantaged Black students were reading better. Other claims have been made about improved reading performance and most of them document improved standardized achievement test scores.

The question addressed in this paper is the degree to which improved achievement test scores in reading are indicators of generalized ability of students to read competently their textbooks and other materials. This question is important not only for educational planning in schools, but also for school/public relations based on the assumption that improved scores mean that students can succeed in school and that schools are improving.

Research Question

This study was designed to compare the reading achievement test scores of low-income Black students in grades 3 through 8 with their ability to comprehend the social studies books used in their classrooms. The study addressed the following question: Are the reading scores on a standardized reading measure predictive of the students' ability to comprehend social studies text?

Review of Literature

The use of standardized testing to judge school effectiveness has increased (Willie, 1985), and considerable opinion has been voiced about the negative effects of the current standardized testing movement. Although most authorities do not favor eliminating assessment, most believe there is an over reliance on standardized tests (Langer & Pradl, 1984). According to Haney (1985), no learning theory justifies the way testing programs now are being used to measure individual student learning.

One major criticism of standardized tests is that their use has caused the curriculum to focus on a narrow range of capabilities (Savage, 1984; Serow & Jackson, 1983). Also, some charge that the person who is developing the curriculum is not the teacher but rather the testmaker (Meier, 1984). The resulting uniform curriculum, in turn, has encouraged more uniform methods of instruction (Serow & Jackson, 1983) and the use of a single set of textbooks for each grade (Stedman & Kaestle, 1985).

The amount of time spent preparing or coaching for the test has caused concern among testing observers. Further, both Adler (1982) and Madaus (1985) express concern that students are memorizing the questions for the test without an understanding of the questions' content. Critics hypothesize that the only thing the student may be proficient in is passing tests. Students need broad general knowledge in order to be competent readers; therefore, focusing on skills to pass tests is counterproductive (Singer cited in Savage, 1984). Classroom observers report that many students are wasting much of their time filling in blanks on worksheets and workbooks (Madaus, 1985; Meier, 1981; Savage, 1984).

In the area of reading, standardized achievement tests may not be testing reading comprehension (Blanchard, Borthwick, & Hall, 1983; Readence & Moore, 1983). The preparation of students for the various reading subtests has promoted specific skills teaching. According to Meier (1981) the emphasis on phonics, syllabication, and pronunciation in most tests encourages slow oral reading and memorization of phonic rules. She believes that all the emphasis on skills reduces reading competence because the students are preparing for the kind of reading required on the test. In advocating a holistic approach

to reading for Black students, Boykin (1984) suggests that dissecting the sequential steps in reading has failed. When Black children enter school they are excited about learning, he reports, but become demoralized because of the ways spelling and reading are taught.

Meier (1981) even goes so far as to say that since good reading requires risk taking which leads to errors that are eventually corrected as readers practice, simply preparing students to do well on reading tests promotes poor reading behaviors. She states that the generally short, pointless reading passages followed by trick questions and multiple choice answers keep students from using the strategies that develop good readers.

Alternative types of assessment have been recommended. Serow and Jackson (1983) favor the curriculum-based exam proposed by Madaus (1985) and others, wherein the content for the exam is derived entirely from what is taught in the school. Haney (1985) suggested the use of Degrees of Reading Power (DRP) by Koslin and Associates because that test focuses exclusively on holistic reading comprehension, using methodology akin to Bormuth's (1968a) cloze procedure. The scoring system compares the student's reading performance with the difficulty of actual textual materials. DRP provides a scale that is useful for instruction in contrast to traditional readability grade-level estimates.

The cloze technique which was the basis for the DPR was developed and validated for a variety of study purposes (Coleman & Miller, 1968; Gallant, 1964, 1965; Taylor, 1953). Bormuth (1967, 1968a) put the methodology for the cloze procedure into general use through research which established the procedure's usefulness in measuring comprehensibility of passages of text.

Bormuth (1962, 1963) used comparisons between results of multiple choice comprehension tests and those of the cloze for his results and for the use of cloze as a substitute for readability formulas.

As measures of general reading comprehension, cloze findings have been compared with scores of a variety of stadardized reading tests: Diagnostic Reading Test (Rankin, 1957), Cooperative Reading Test (Jenkinson, 1957), Metropolitan Achievement Tests (Gallant, 1965), Gates Reading Survey (Schneyer, 1965), Stanford Reading Tests (Ruddell, 1963). Strong correlations between results of cloze and reading comprehension as measured by standardized tests were found in those studies and have underpinned professional assumptions about standardized test scores as measures of reading competence.

The Study

This study examined the relationship between the results of a standardized reading achievement test in grades 3 through 8 and students' ability to read their social studies textbooks. The standardized test results were obtained from the reading subtests of the Stanford Achievement Tests (1982). A cloze passage was developed from the social studies textbook used at each grade level. The Dale-Chall Readability Formula was used to determine if the readability of each selection were at the designated grade level.

The research addressed the following question: Are the reading subtest scores of the Stanford Achievement Tests (SAT) predictive of the students' ability to comprehend grade level social studies text material as measured by the cloze procedure?

Subjects

The population for this study included all students in grades 3 through 8 in an elementary school in a low income neighborhood of a large Southern city. All 239 students involved in the study were Black; 51% (122) were male and 49% (117) were female. All of the students qualified for participation in the free lunch program at their school.

Procedures

The reading subtests of the Stanford Achievement Tests, which were administered in April 1985, were used to obtain students' scores of general reading ability. The SAT reading battery provides a total reading score and subtest scores in the areas of word study skills and reading comprehension at grades 3 through 6. The SAT provides only a reading comprehension score at grades 7 and 8. A cloze procedure was developed for each grade level using materials from the social studies book. Each selection was representative of the book in style and content and was determined to be at grade level readability using the Dale-Chall Readability Formula. The cloze procedure was administered to each class within two weeks of the administration of the standardized test. Bormuth's (1968b) procedure provides a score which gives an estimate of the ability of each student to read a particular text selection at one of three levels of success: independent reading level (58-100%); instructional reading level (44-57%); frustration level (0-43%).

Analysis

Descriptive statistics including frequencies, means, medians, modes, and standard deviations were computed. In addition, the writers also computed the Pearson product-moment correlations between the results of the standardized

achievement test and the cloze procedure scores. Correlations at both the moderate (.40 -.69) and high (.70 and higher) levels were considered to be of practical significance in the analysis of the data.

Results

To determine if reading scores on the standardized test were predictive of low income Black students' ability to comprehend social studies text, the mean scaled scores on the SAT and the cloze procedure were charted.

Insert Table 1 about here

The mean scaled scores were converted to percentiles and stanines. With the exception of the reading comprehension subtest at the fourth and fifth grade levels, class averages were at the 4th or 5th stanine. The means for all grade levels on the cloze procedure were in the frustration range.

Insert Table 2 about here

A Pearson product-moment correlation coefficient then was calculated to determine the degree of relationship between the SAT reading subtests and the cloze procedure results. Data were compared by grade level. With the exception of the reading comprehension subtest at the fifth grade level, which was in the low range, all correlations were in the moderate range.

Insert Table 3 about here

The number of students in the total sample who had scored at the instructional level on the cloze procedure (44% or above) were counted and

percentages computed. Fifteen percent (36) were at the instructional level; most students (203) measured at the frustration level on the cloze procedure.

Discussion

The results of this study indicate that the questions of reading researchers about the transfer of reading skills demonstrated on standardized tests to actual text materials are justified for this population. These classes would appear to be in the average range (4th-5th stanine) for students taking the SAT. In spite of moderately high correlations such as those of other studies between the SAT and the cloze results, only a small percentage (15%) of the students were actually able to demonstrate the ability to read the grade level text with success. Although further study is indicated with more formal measures and with control for prior knowledge and in replication with this population, preliminary conclusions indicate that this school and others may continue to have problems with students who are unable to comprehend their content area texts in spite of satisfactory reading scores on standardized tests.

These data dramatize researchers' concerns that recent emphasis on raising test scores is resulting in curriculum distortion in favor of low level skills and away from comprehension of content. Questions as to whether the teaching of narrow reading skills is enough to develop readers who can comprehend content text are worthy of further study. Broader reading instruction may be especially important for low income students because limited resources at home may constrain the opportunity for the broad learning experiences often provided for middle class students.

In general, the importance of general knowledge to reading comprehension has been ignored in the current movement to raise reading achievement test scores. Administrators and the public should begin to question whether test scores adequately demonstrate that schools are increasingly effective and that students are able to read and succeed in school.

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Table 1

Descriptive Statistics for
Stanford Achievement Test Reading Subtest
Scaled Scores and Cloze Mean Scores

		Word Study Skills		Reading Comp.		Total Reading		Cloze	
Grade	N	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
3	36	616.9	39.7	597.7	45.5	606.1	37.4	27.9	16.1
4	49	606.3	32.3	595.1	28.2	601.2	25.9	36.5	14.2
5	40	615.6	34.7	615.9	21.5	616.0	28.0	24.5	8.1
6	42	620.0	26.5	646.4	26.0	634.7	22.3	34.4	10.6
7	47	-	-	-	-	648.2	31.0	25.4	9.8
8	25	-	-	-	-	654.9	24.3	24.2	10.6

Table 2

Reading Subtest Percentiles, Stanines
and Percentage Correct on Stanford Achievement Tests
and Percentage Correct and Levels on Cloze Procedure

Grade	N	Word S.S. %	Stanine	Reading Comp. %	Stanine	Total Reading %	Stanine	Cloze Correct %	Cloze Level
3	36	57	5	43	5	49	5	27.8	Frustration
4	49	39	4	10	2	30	4	36.4	Frustration
5	40	44	5	10	2	27	4	24.4	Frustration
6	42	27	4	40	5	34	4	34.3	Frustration
7	47	-	-	-	-	34	4	25.4	Frustration
8	25	-	-	-	-	32	4	24.2	Frustration

Table 3

Pearson Product-Moment Correlations
for Stanford Achievement Test Scores
and Cloze Scores

Grade	N	Word Study Skills	Reading Comprehension	Total Reading
3	36	.5676*	.6362*	.6671*
4	49	.5810*	.5878*	.6586*
5	40	.6416*	.3152*	.5395*
6	42	.5286*	.5139*	.5983*
7	47	-	-	.6570*
8	25	-	-	.6465*

*Statistically significant at $p < .001$.